Remarks

35 U.S.C. §112.

Claims 61 and 62 have been cancelled.

35 U.S.C. §101.

The issue identified under §101 is moot in view of the cancellation of claims 61 and 62.

Double Patenting.

The rejection of claims 17-62 on the basis of non-statutory obviousness-type double patenting in view of claims 1-12 of U.S. Patent No. 6,643,297 is noted. It is requested that the rejection be deferred, and if the Examiner continues to maintain the rejection after the claims of the present application have otherwise been allowed, an appropriate terminal disclaimer will be submitted to the Patent and Trademark Office.

35 U.S.C. §103(a).

The Examiner has rejected claims 17 to 62 under 35 U.S.C. §103 as being unpatentable over the combination of Nelson (US6962992) and Ramarkrishnan (US2003/0012196).

In view of the changes entered to the claims, Applicants are respectfully of the view that the §103(a) rejection of claims 17 to 62 is no longer applicable.

The independent claims have been amended to clarify that the replicated packet stream is communicated to a network service provider device/circuit which is located

connection. Furthermore, the main claims have been amended to clarify that the network service provider device/circuit processes said replicated packet stream in order to generate service data for the traffic data contained in the packet stream being carried on the through channel. The generated service data is provided in a packet stream to the switch means/element in order that service data can be switched into the traffic data packet stream being carried on the through channel. Advantageously, switching of the packet stream containing service data into the traffic data packet stream on the through channel can occur without switching the traffic data packet stream <u>through</u> the network service provider device/circuit, thereby avoiding a switching delay which would otherwise be incurred.

Basis for the changes made to the main claims is found in at least the description of figure 11.

New claims 63 and 64 have been added and are also derived from the description of figure 11.

Various changes for reasons of consistency and correctness have been made throughout the claims as will be apparent from the markings in the claims submitted herewith.

More specifically, in exemplary embodiments where the packet mode switch fabric/packet mode portion of the circuit switched connection is employed to adapt incoming TDM traffic data to respective packets streams and to readapt the packet streams to respective outgoing TDM circuits, a key advantage of the invention is the ability to use a packet mode switching fabric to provide all the services available in TDM switches, without any disadvantage of delay and distortion that are encountered in TDM switches as discussed in the specification in connection with the prior art systems depicted by figures 1 to 3. . One use of the invention is to ensure an incoming call can be connected without hindrance to resources such as network announcements, echo cancellers, tone detectors and generators, conference

bridging, lawful intercept and other network provider services that may be needed throughout or only for part of the processing of a call.

Another advantage of the invention is that it avoids multiple adaptations between TDM and packet modes that would cause imbalance in or too much delay for voice circuits, and thus 'sidesteps' the distortion that would accrue otherwise, by performing a bridging function in the packet domain.

The combination of Nelson and Ramarkrishnan neither discloses nor suggests processing a replicated packet stream to generate service data and switching the service data into the corresponding packet stream all within the packet domain.

Ramarkrishnan discloses the following with respect to replication of data flows:

> "[0024] Input links 201, 202 and 203 are connected to switch 200 at input ports 1, 2 and 3, respectively, which are connected to interconnection network 210. Interconnection network 210 is connected to data output ports 1, 2 and 3. Output links 221, 222 and 223 are connected to data output ports 1, 2 and 3, respectively. Interconnection network 210 is also connected to monitor port 1 which is connected to promiscuous monitor processor 230.
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> [0025] Interconnection network 210 routes data packets received at an input port to the appropriate destination data output port(s). The number of input ports and/or output ports for switch 200 can exceed the number of links of the network connected to switch 200. Additional output ports therefore are available for connecting one or more promiscuous monitors. In addition to switching communication data packets between the input ports and the data output ports, interconnection network 210 also routes a copy of data packets received at each input port or output port to the monitor output port 1 through the use of known point-to-multipoint multicasting techniques within a single switch. Point-to-multipoint multicasting is the routing of a single message to multiple

recipients. Typically, multicasting is utilized to allow a single sender to transmit a message, through the various switches of a network, to multiple senders connected to the network at various locations. To support such multicasting, switches incorporate internal mechanisms to multicast incoming data to more than one output port; at least one of these additional output ports can then act as a monitor port. The present invention takes advantage of this multicasting capability of the network by treating traffic on each input port of the switch as being from a sender which has receivers downstream on more than one output port. Thus, by multicasting within the switch, the network data traffic that passes through this switch can be promiscuously monitored.

[0026] FIG. 4 illustrates a multicasting routing methodology to perform promiscuous monitoring within the switch shown in FIG. 3. As a data packet is received at input port 2, interconnection network 210 routes the data packet to the destination data output port, for example, data output port 1; this is represented in FIG. 4 as a dotted line. Interconnection network 210 also routes a copy of the data packet to monitor output port 1; this is represented in FIG. 4 as a solid line. Similarly, as a data packet is received at input port 1, interconnection network 210 routes the data packet to the destination data output port, for example, data output port 3; this is represent in FIG. 4 as a dotted line. Interconnection network 210 also routes a copy of the data packet to monitor output port 1; this is represented in FIG. 4 as a solid line. Although not shown in FIG. 4, interconnection network 210 routes each data packet received at each input port to the appropriate destination data output port(s), while also routing a copy of all data packets or routing a selective set of data packets to monitor output port 1."

What is clear from Ramakrishnan is that replicated packet streams are communicated to a data output port or ports for transmitting to a monitor processor or processors. The monitor processor processes the replicated packet stream(s) in order to evaluate the communication network. Thus, the combination of Nelson and

Ramakrishnan does not teach or suggest generating service data and switching the service data into the original packet stream being carried on the through channel within the packet domain which is advantageous for the reasons explained above.

Accordingly, applicants believe that the claims as amended place the application in condition for allowance. Such action is therefore solicited.

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